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ABSTRACT

Characteristics of U.S. higher education are identified, along with the structural features that influence the nature of research, specific research topics, and the locations of research activities. This information was obtained from several sources, including the Educational Resources Information Center database for the years 1981 and 1982, the American Educational Research Association annual publication, and the bibliographic handbook prepared by the U.S. Office of Education. Five distinctive characteristics of U.S. higher education are discussed: the decentralized nature of the system, the fact that most colleges are chartered as individual corporate bodies, the multiple pattern of finances for higher education institutions, the diversity of academic programs, and the large numbers of students. The question of how these five attributes affect research is also addressed. It is noted that in the past 15 years, there has been much more attention to large-scale studies that generate data that are compatible over time. Various research programs sponsored by the federal, private, and university sectors are cited. Among the research topics that are identified are the following: management, planning, communication, student enrollments, faculty, teaching/learning processes, and educational technology. (SW)

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RESEARCH ON HIGHER EDUCATION: A U.S. PERSPECTIVE

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RESEARCH ON HIGHER EDUCATION: A U.S. PERSPECTIVE

A. INTRODUCTION

Research in every active field of study is a flowing changing stream of intellectual and technical endeavors. In higher education, that is to say the study of universities and other tertiary level institutions, some parts of the stream move rapidly, those currently associated with computer technology for example, others move more slowly and evenly -- historical studies illustrate this -- while still others swirl into eddies of uncertainly, testing is a case in point. The summary that follows dips into that stream of research in the United States to come up with a sample of the general topics and specific studies that characterize recent inquiry. The material presented here is, necessarily, limited in a number of ways. It is bound by time to the present decade, the nineteen eighties, with a focus on 1981 and 1982. A choice has been made, too, of those subjects which are closely related to the distinctive features of U.S. postsecondary education. This means, of course, that many topics held in common interest across national boundaries are not included: manpower studies are one such omission. Finally, an attempt has been made to select studies that promise to "travel well" into other national settings, especially those with CEPES membership.

Given the extensive scope of this subject, a methodological note is required to allay any suspicion of pretentiousness. An outline was constructed around the distinctive aspects of higher education in the United States. On these categories and subcategories the ERIC Clearinghouse of Higher Education conducted a "custom computer search"

(ERIC, 1983). A total of 828 entries, each with title and abstract, was generated for the years 1981 and 1982. Some work done earlier but recently introduced into the file is included. Two other valuable annotated bibliographic sources were used. The annual volume prepared by the American Educational Research Association covers all levels of education but the chapters synthesize main lines of inquiry in useful ways (Gordon, 1983). The bibliographic handbook prepared by the Office of Education brings together many of the active researchers as chapter authors (Halstead, 1981). Finally, a set of journals was examined for 1982 and often 1981 to gather specific data. The selection of journals were made much easier by a recent study of Bayer (1983) who identified the most critical publications. These materials have been fitted together in a design which first identifies five distinctive characteristics of U.S. tertiary level education, matches some works that orient research activity around those characteristics, and then summarizes illustrative studies completed or reported recently.

B. CHARACTERISTICS OF TERIARY LEVEL EDUCATION IN THE U.S.

As Ortega (1946) emphasized, research in universities, and we may say on universities, is entwined with the culture. Among the distinctive characteristics of the educational culture for the United States none is more important than the decentralized nature of the system. It is function, not structure, that allows us to use the term system at all. Responsibility for all education, school through university, is assigned by the Constitution to the individual states, not the federal government. The federal role is not insignificant but it is confined to selected avenues of influence such as: (a) maintaining a flow of public funds to individual students by means of grants, loans,

and work subsidy programs, (This support is tested for economic need and pays part of the cost established by each institution. Of those students finishing secondary school who aspire to further education fifty-one percent applied for financial aid [NCES, 1983b].); (b) sup porting by grants and contracts a wide range of research projects that have national significance; (c) gathering and publishing statistics that accurately reflect conditions in enrollment, degrees awarded, finances of institutions, and facilities; (d) monitoring and insuring by legal initiatives that all educational institutions support the civil and personal rights of individuals who are students.

A second distinctive feature is that just about all universities and colleges are chartered as individual corporate bodies. The board of trustees, sometimes called governors, overseers, or regents, together with the administrative officers of the instituiton, have both autonomy and responsibility in deciding the destiny of the institution. The role of faculties in such a setting shows some interesting variations. In some states the institutions of higher education are joined in coordinated relationships, but a fully centralized state system is uncommon.

The pattern of finances for institutions of higher learning presents a third distinctive feature. Multiple sources of funding to provide the necessary income are found in every institution. This has the effect of increasing the amount of financial management because revenues must be raised as well as disbursed to maintain a state of equilibrium. The budget under such circumstances becomes a primary instrument of policy and control.

Another area of distinctiveness is the curriculum. Many more

subjects and degrees have been developed by universities in the U.S. than can be found elsewhere in the world. All levels of knowledge and technology are served by particular degrees, business management and library science, for example. Related to the diversity of academic programs is the design of undergraduate study itself. Preparation for a baccalaureate degree requires four years of study in either college or university. This is in contrast to three years of study within a particular faculty that marks university life elsewhere.

Finally, there is the matter of size whose effects are ably analyzed by Ben-David (1972). More than 3,200 tertiary institutions enroll about 12.3 million students in degree programs, 4.7 million matriculated in two-year colleges (NCES, January, 1983). Age participation rates for the 18 year-old group, recent secondary school leavers, are among the highest in the world with between 30 and 45 percent of the young people going on to further education. It is against this background of decentralized control, corporate organization, multiple funding, a diversity of academic programs, and large number of students that research is conducted.

C. HOW STRUCTURAL FEATURES INFLUENCE THE NATURE OF RESEARCH

1. Size: We now turn to the question of how these five attributes are translated into effects on research. Looking first at size, the large numbers of students and the diversity of academic programs combine to influence research activity in several ways. To comprehend or even describe the field of higher education by intuitive means or by inference from small scale, intensive investigation is all but impossible. Experience of the 1960s also made clear that the effects of education are best examined over a long period of time, five years or

more. In the last fifteen years, there has been much more attention to large scale studies that generate data that are compatible over time. The Cooperative Institutional Research Program (CIRP) has an elaborate sampling design for gathering and interpreting responses from students during their first year of study. Begun by the American Council on Education, these data and a number of special follow-up studies are carried out by the Higher Education Research Institute at The University of California, Los Angeles. The CIRP data provide excellent descriptive profiles of entering students and subsequent analysis has identified reasons for non-completion, changing job orientations, and plans for post graduate study among upper class students.

The National Center for Educational Statistics (NCES)is the federal office responsible for national data collection. Information on enrollment, finances, and academic programs is obtained through the Higher Education General Information Survey (HEGIS) and the computer tapes can be purchased by researchers. Over the past decade the quality of information has improved and many states use preliminary aggregations to report local conditions. More recently NCES has undertaken the National Longitudinal Study, a cohort analysis that will follow certain classes through secondary school and university. Short reports are issued frequently and the data tapes are available for detailed research. A recent Bulletin, for example, reports the differential language abilities of Hispanic students across the nation (NCES, 1982). A researcher looking at regional differences could make a more detailed analysis from the main data file.

The National Science Foundation has carefully built up an integrated data base, updated yearly, that incorporates four surveys;

Scientific and Engineering Expenditures at Universities and Colleges, Scientific and Engineering Personnel Employment at Colleges and Universities, Graduate Science Students and Post Doctorates, and Federal Support to Universities, Colleges, and Selected Non-profit Institutions. Summaries are published, but data tapes may also be purchased to conduct further study.

Two important non-governmental organizations have extensive information about secondary school graduates who have taken admissions examinations before entering the tertiary institutions. The Educational Testing Service at Princeton, New Jersey has conducted and reported on the tests of the College Entrance Examination Board. Another organization, The American College Testing Program in Iowa City, Iowa, conducts similar tests for many institutions across the nation. So important is the quality of these data that the technical reports and summaries published by both organizations are carefully reviewed and interpreted by the educational community. The data on individual performance is confidential but the aggregated results are reported.

Still another important series of data comes from The American Association of University Professors who summarize annually, "The Economic State of the Profession" (AAUP, 1981). This document reports the salary structure in a manner that is regarded as representative of the national scene.

Size dictates the need for these large scale data bases and growth has increased their importance to researchers. As familiarity with the data sources improves, as costs of surveys and or collection methods rise, and as computer programs become more flexible, more research will focus on secondary analysis of large scale data files.

2. The Corporate Form of Organization: Similar influences on the nature and direction of research have developed out of the corporate form of organization and decentralized responsibility. As numbers of students increased a focus developed on the university as an institutional entity in and of itself. However, the principal and traditional functions of teaching, inquiry, and scholarship are actually performed at the level of the department, research institute or laboratory within the framework of each discipline. A most important work in fixing the institution as the unit of inquiry was Clark Kerr's, The Uses of the University (2nd ed., 1972). This natural division between the institutional whole and its educational parts was accentuated by important lines of research that sought parallels with business corporations, developed a rich terminology, and identified issues of importance to the institution. A concise analysis of the strains of organizational theory and management technique that were applied to educational settings is presented by Yeakey (1983). The favored theoretical frameworks for viewing the university as an organization in the present decade reject formal structure for: (a) socio-political models set forth in the work of Baldridge and Tierney (1979) (Riley and Baldridge, 1977); (b) partially ordered structures captured by the idea of "organized anarchies" (Cohen and March, 1974) or by Weik's notion of "loosely coupled systems" (1976); (c) functional approaches that attempt to comprehend the interrelationships within an institution (Mortimer and McConnell, 1978).

Within this conceptual set research has tended to cluster around functions that present labels new to higher education; decision-making, communication, governance, management, organizational climate, planning

or, lately, strategic planning. Thus we find comprehensive summaries of management (Jedamus and Peterson, 1980), recommendations on controlling organizational climate (Bolding and Van Patten, 1982), considerations of communication processes as they fit higher education (Gratz and Salem, 1981), new orientations, strategic orientations, to planning (Cope, 1981; Poulton, 1981) decision-making as a general phenomenon (Cullen and Perrewe, 1981).

Of special interest in these uncertain times are indicators that can signal soundness or coming failure to the managers of institutions. There are national studies of financial indicators (Gomberg and Atelsek, 1981) and technical papers on the nature of indicators themselves (A.I.R.B.S., 1981) as well as the correlates of decline (Zammuto, 1982). So many institutions have faced declines in resources that a literature on managing retrenchment has appeared (Frances, 1982; Powers, 1982) complete with personal examples (Duke, 1982).

Action research reporting experience with the application of techniques of management is less common than it was five years ago but articles do appear on "zero base budgeting" (Boyd, 1982), cost analysis of academic units (Walters, 1981) and similar topics. Some microanalysis is beginning to reappear with a focus on the department chair (Whitson and Hubert, 1982; Bennett, 1982).

3. Student Enrollments: Another manifestation of the institutional orientation is found in the large amount of research now being done on keeping enrollment levels up. In contrast to the situation in most other countries there is a surplus of university places in the U.S. Because a significant share of revenue comes directly from fees to students or from government allocation based on

enrollment numbers it is convenient to consider many institutions as "enrollment driven." That means that forecasts of enrollment, examination of drop-outs, and the recruiting of students are major research topics. The prediction of enrollment conditions in the future requires judgements about the relative importance among factors of demography, economics, and personal choice (Baldridge, Kemmerer, and Green, 1982; Janna, 1981). The students who do not finish college, variously called "non-persisters," "drop outs," make up an "attrition" rate that presents interesting research issues. The framework of analysis has been set by Astin (1975) and Tinto (1982). The elaboration has been provided Pascarella (1982) and others. Research focuses on apsects of undergraduate experience that correlate with the decision to leave studies, for example, financial aid (Jung and Liu, 1982) academic performances (Aitken, 1982) use of facilities (Churchill and Iwai, 1981) attributes of race (Rugg, 1982) or the interrelationship of several factors (Munroe, 1981). Equally important are the steps that can be taken to prevent dropouts (Lenning, 1980) and increase enrollments by the use of marketing techniques. Since the basic presentation of the marketing idea in non-profit settings was made by Kotler (1975) many studies have reported experimental approaches (Grabowski, 1981).

4. Faculty: Just as students are an important collectivity for the institution so also is the faculty. There are several main themes that have continued to draw interest during the past five years. Whether the quality levels established in the 1960s can be maintained by attracting young talent is the point of an analysis by Atelsek and Gomberg (1976) and its ramifications continue to be explored. The flexibility of movement out of the profession as well as into it is

captured in the work of Patton (1971) and continuously reassessed by others. The adequacy of the reward structure in the academic world is under frequent study (Lewis, Becker, and Ballinger, 1979). The practice of tenure and its relation to both academic freedom and vitality draws research not only to analyze it, (Tucker and Mautz, 1982) and to record the nature and extent of current practices (CUPA, 1981) but also in longitudinal studies, to provide a sense of the direction in which the profession is moving, or not moving (Willie and Stechlein, 1982). The technical issues surrounding evaluation of faculty performance for institutional purposes rather than self-improvement draw attention steadily (Whitman and Weiss, 1982). There has been a marked increase in professional self-consciousness among faculty and it is reflected in the amount of investigation directed toward issues that affect academic life. How trade unionism, collective bargaining is the American term, changes the behavior and the reward structure is one such issue.

An increase in part-time appointments is another factor that has prompted a line of inquiry (Roemer and Schnitz, 1982; Tuckerman, Vogles, and Caldwell, 1978; Leslie, 1978). Underlying much of the research on the profession is a suspicion that fundamental changes are occuring in the professoriate, its relation to the institutions it inhabits, and to society at large.

5. Teaching/Learning Processes: If we move away from the institution level orientation to a consideration of teaching-learning activities as embodied in academic programs then several lines of investigation become clear. Again it is the nature of the postsecondary system that supports those lines. The diversity of programs, for

example, encourages an unending search for a common foundation to university experience, which is called "general education." The actual amount of time allocated to general studies has decreased slightly according to the analysis of Blackburn (1976). Comprehensive attention is found in the work of Gaff (1981) and a reconsideration of the philosophy was recently offered by Bayer (1983). A second distinctive theme in American higher education, a very well developed theme, views the curriculum as an instrument of personal development. The concept of a developmental curriculum is far broader than the traditional approach emphasizing only cognitive developments. Themes for research come now from the work of Chickering (1982); and Perry, (1968); and Heath, (1968) with strong connections to the work of Sanford, Newcomb, and Katz in the early 60s. There is a small but steady flow of research on the interactive processes of the classroom (Wilson, Gaff, Dienst, Wood, and Barry, 1975; Theophilides and Terenzini, 1981; Baum and Brown, 1980; Ford, 1981). An intriguing corner of this research deals with the ways in which symbolic authority influences the receptivity of audiences (classes) for cognitive material, the "Dr. Fox Effect." (Leventhal and Perry, 1982). Within the past few years there is also evidence of increased interest on the part of professional associations, The American Historical Association, American Sociological Association and The American Association of Physics Teachers (1981), in the curriculum and classroom. Among the new concerns in the problem of how to measure the "outcomes" of the undergraduate curriculum. A comprehensive and interesting approach has been developed by the American College Testing Program and reported in technical papers over the past several years (Ward and Pringle, 1981).

6. Educational Technology: A final area of investigative interest in this overview of research on higher education can be categorized in very general terms as educational technology. Intuitively any observers knows that a great deal of intervention, development, and application must be happening in education as a result of introductions like telecommunications, macro and micro computers, and video tapes or discs. Upon investigation, however, one finds that very few of these developments are treated specifically in the educational literature. There are quite visible reasons for this. The technology has so many applications, in business, the professions, and government that educational uses are almost incidental. Then too, the fields are moving so rapidly that neither experimentation or action research has been translated into a literature. In computer applications the first reports are just now appearing (Masat, 1981).

D. THE LOCATIONS OF RESEARCH ACTIVITIES

In keeping with the decentralized tradition of tertiary level education in the U.S. one finds research and the associated activities of dissemination and publication appearing in many forms. The federal offices frequently make research contracts with independent entrepreneural research companies to have a particular type of investigation carried out. Although such corporate enterprises are often located near universities they operate entirely as private businesses. Within universities, institutes, centers, and laboratories many also undertake contracts for research paid for by state, local, or federal offices. Research by means of a fixed term contract, with specific requirements, and paid for by a fixed amount of funds is the

most common way of carrying out research. This sponsored project system became dominant in the national sciences just after World War II and then spread to other fields.

In the particular field of higher education there are about twelve research centers with University of California at Los Angeles, and at Berkeley, University of Michigan, The Pennsylvania State University, Columbia University, University of Arizona, SUNY Bffalo, Florida State, and Memphis State University among the best known. Individual research of note is carreid out at the University of Chicago, Stanford University, Vanderbilt University, and Howard University among others. A review of technical papers also shows that state governing boards in Illinois, Indiana, Wisconsin, California, Minnesota, and New York report at least a part of their work in a research format.

The process of dissemination is accelerated by several annual conferences at which recent research projects are reported in various kinds of scholarly sessions, seminars, round tables, formal addresses, and critiques. The largest meeting is conducted by the American Educational Research Association and the topics cover every level and type of educational activity. The American Association of Higher Education includes many deans and directors as well as researchers and topics have a practical emphasis. The Association for Institutional Research is an excellent forum for those on university or college staffs whose responsibility includes local research. The Association for the Study of Higher Education counts both researchers and teaching scholars among its members. The American Council on Educaton, the chief organization for institutional memberships, brings together presidents, chancellors and senior academic officers. There are still other

specialized organizations devoted to the interests of business officers, NACUBO, the National Association of College and University Business Officers to personnel, the College and University Personnel Association and many others. Types of institutions meet together to provide common discussion of issues.

In terms of publications the Educational Research Information Centers, the ERIC system, is one of the most significant developments of the past two decades. Each ERIC clearinghouse has a special area of interest, teacher preparation, guidance, higher education, or measurement, to give a few examples. Mostly they are affiliated with universities and their function is to catalogue and make available in a variety of forms scholarly and technical material judged by their editorial staff to have lasting value. It is a highly successful way of gathering together small projects that might otherwise be lost to general use.

There is a full range of scholarly journals for higher education, mentioned earlier in this paper. But there is also a steady flow of newsletter publications and special monographs from research centers. The whole process of distribution, complex and costly though it may appear actually contribute to efficiency. It reduces redundant studies and thereby advances the state of technical and scholarly standing.

Until the late nineteen seventies the configuration of research interests in higher education changed rather slowly. Topics under study in 1970 were still receiving attention at the end of the decade. However, it now appears that a major alteration in the pattern of research is underway. There is a differentiation toward inquiry at the state levels of policy, toward events confined to certain institutional

types, and toward issues shared with other institutions. At the same time, methodology is broadening to include more historical, ethnographic, and qualitative research, still not neglecting the rigorous quantitative approach to empirical inquiry. It is too early to know the full scope of the change but the signs are visible.

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